MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

ANNUAL REPORT, 1979–1980

Alfred L. Frechette, M.D.

Commissioner of Public Health

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June 30, 1980

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Commissioner of Public Health
Chairman, Public Health Council

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FROM THE OFFICE OF THE COMMISSIONER

In the year that ended on June 30, 1980, the Department of Public Health was able to achieve two of its main objectives for strengthening its organizational structure to provide more effectively the mandated programs and services required to meet the multifaceted needs of the people of the Commonwealth. Reevaluating its priorities for the next decade, the Department has emphasized the importance of the environment on health. To answer the concerns of both the public and health professionals about the possible toxic effects of contaminants and pollutants in the environment, the Department established an Environmental Health Section, under the direction of an Assistant Commissioner, that became operative on July 1, 1979. Encompassing the Divisions of Radiation Control, Food and Drugs, Community Sanitation, and the Lead Paint Poisoning Prevention Program, the Environmental Health Section has been active in monitoring the health effects of contamination and pollution of the environment, whether in the ambient air, drinking water, rivers and harbors, or in our food supplies. A major responsibility of the section is to monitor the health status of communities through birth and mortality statistics collected and analyzed by the Division of Health Statistics, Office of State Health Planning.

The second major organizational change was the creation of a Community Health Services Section, under the direction of an Assistant Commissioner, to permit greater cooperation among divisions and units that are responsible for providing direct services to the public. The Community Health Services Section includes the Divisions of Family Health Services, Preventive Medicine, and Tuberculosis Control, the Regional Health Offices, and the reactivated Division of Dental Health. The Division of Family Health Services reorganized its staff and instituted an important reform in the administrative procedures for requesting, contracting, and evaluating services. The Division also began a reanalysis of current maternal and child health problems and needs to help make future programs more appropriate and effective. In addition, the Division participated in drafting new pediatric inpatient regulations and initiated a research program on the reduction of childhood accidental injuries. With the appointment of a new director, the Division of Dental Health, which had, in the past years, concentrated its efforts solely on the professional management of the Department of Public Welfare's Dental Medicaid Program, has begun to redirect its energies toward programs of dental treatment, prevention, research and education. By the end of the fiscal year, the Community Health Services Section was in place and ready to begin functioning.

The reestablishment of the Division of Health Education as an independent division within Management Services allowed the Department to reopen communication with local boards of health. The Division of Health Education will strengthen the Department's capability to respond more effectively to the needs of local boards of health, and to facilitate the continuing education of local health officers.

As part of its mandate to protect the well-being of the people of the Commonwealth, the Department has reaffirmed its commitment to programs of disease prevention and health promotion. These expanded projects include school-based antismoking programs, school mouth-rinse programs, early childhood screening and accident prevention, alcoholism education geared especially to women and youth, and prevention of hypertension through education and screening.

Today, the Department of Public Health is no longer alone in its concern for creating a system of health services that will be available, accessible and acceptable to all of the people. Federal and state planning agencies, regional organizations, and community groups are all involved in the "business" of health care. Among the many health-oriented groups, the Department has played an increasingly important role in planning and regulating health care services and facilities in the Commonwealth.

The achievements of the Department cannot be judged in terms of one year's activities. Its progress will be measured only after a period of time when long-range results have been more clearly evaluated.

This 66th Annual Report* is a brief accounting of the activities of the Department of Public Health during a year in which the Department has sought to strengthen the balance among its three major responsibilities—protection, regulation, and service.

Alfred L. Frechette

Alfred L. Frechette, M.D., M.P.H.
Commissioner

*In 1914, the Legislature passed an act dissolving the Massachusetts Board of Health and creating the State Department of Public Health.

COMMUNITY HEALTH SERVICES

With the formation of a section of Community Health Services, under the direction of an Assistant Commissioner, the Department moved to strengthen the activities of the divisions and units that provide direct services to the people of the Commonwealth: the Divisions of Family Health Services, Preventive Medicine, Tuberculosis Control, and Dental Health, and the Regional Health Offices. Consolidating these units under the aegis of an Assistant Commissioner will allow greater sharing of related activities, increased potential for community services, and better future coordination.

FAMILY HEALTH SERVICES

Improved health services to mothers and children in the Commonwealth remained an important part of the Department's total effort to upgrade community health. Two components of the Division of Family Health Services—Maternal and Child Health, and Services to Handicapped Children—carry out the responsibilities mandated under Title V of the Social Security Act of 1936. To enhance its ability to manage its current programs more effectively and to interact with other units of the Department, the Division of Family Health Services reorganized its administrative structure into four working units within Maternal and Child Health, and two within Services to Handicapped Children.

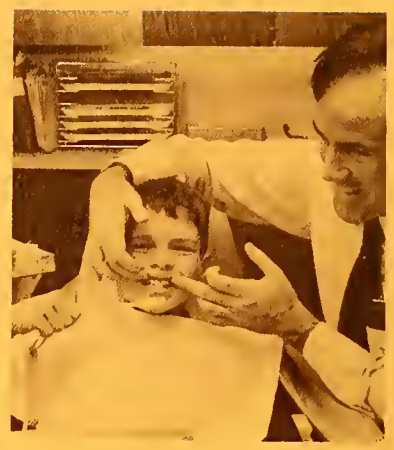
Maternal and Child Health

• The Special Projects Unit continued to serve mothers and children through Maternal and Infant Care (MIC) and Children and Youth (C&Y) Projects throughout the Commonwealth. All the projects provided mothers and children in low-income neighborhoods with a wide range of services. The Intensive Care for Infants Project, located at the Baystate Medical Center in Springfield, provided support services to high-risk infants and their families who use the Neonatal Intensive Care Unit. A developmental follow-up clinic for infants from the intensive-care nursery will follow them up to the age of four. The Dental Care Project continued to provide comprehensive dental care at the Shriver Center in Waltham to high-risk, low-income children in Waltham and surrounding communities, and to mentally retarded children from Health Service Area (HSA) IV.

• Closely related to the MIC and C&Y projects, the Women, Infants and Children's Supplemental Food Program (WIC) added three new programs in the state. More than 34,000 mothers, infants, and children through age five, an increase of 7,000 over the previous year, participated in the WIC program, which provides participants with special food packages, nutritional counseling, and health assessments.

• The new Perinatal Unit seeks to reduce perinatal mortality and morbidity and to prevent handicapping conditions through the improvement of perinatal, neonatal, and pediatric health care for infants and children through the age of three. The Division funded six programs of specialized services, including parent education and support, in the state—two in the central region, two in the western region, and two in the Greater Boston area.

Another activity of the Perinatal Unit, the Screening Program for Hearing Impairment, provided diagnostic evaluation of infants and children up to three years of age who were identified as being at risk for hearing loss. Returns from an informational brochure distributed to each maternity and newborn service and to each Neonatal Intensive Care Unit in the Commonwealth provided data on approximately 42 percent of the newborns in Massachusetts. Ten percent of these infants were found to be at risk; over 600 were enrolled in the testing program.



The Pediatric Project, a joint activity of the Division of Family Health Services, the Division of Health Facility Regulation, and the Office of State Health Planning, completed its work. Proposed amendments to hospital licensure regulations relative to inpatient pediatric services and emergency room care received a public hearing in February 1980, and will be presented to the Public Health Council early in the next fiscal year. During the past year, the project helped organize consultant teams of nurses and physicians to assist hospitals in better understanding the proposed regulations and how they will affect the hospitals. Seventy-nine hospitals that provide pediatric care in Massachusetts were visited; only two refused the service offered.

The Premature Infant Program continued to provide payment of hospital costs for infants under five pounds at birth whose parents do not qualify for Medicaid but who meet the eligibility requirement established by the Department of Public Health. The Division, however, has paid for fewer infants each year as the number of women who qualify for Medicaid has increased. Expansion of the Premature Infant Program to allow for home visits by community health nurses was in the planning stage by the end of the fiscal year.

• The Services for School Aged Children's Unit works to establish and promote standards for

health examinations and assessments of schools throughout the Commonwealth, and to promote optimal health through health services, screening, and health education. The unit made available a wide range of services during the year: three renewed contracts totaling $119,433 were awarded to promote model approaches to school health; 30 school districts on waiver of mandated school health procedures received technical assistance and consultation to develop more flexible, innovative school health programs, as did 50 additional school districts; training was provided to schools for persons conducting vision and hearing testing in the schools; about 1,000 hearing aids were purchased for 700 children as part of the Division's Hearing Aid Program. By the end of the fiscal year, planning had been completed to convert a voluntary program of postural screening for scoliosis in 150 school systems into a mandatory program, as a result of passage of legislation in the General Assembly.

Adolescent health and family planning comprise a strong subsection of Services for School Aged Children. The section contracts with existing programs to provide comprehensive health care to adolescents of both sexes, and to reach adolescents at risk for substance abuse, venereal disease, pregnancy and early parenthood. During the fiscal year, 13 programs under contract with the Division of Family Health Services totaled 26,088 visits by adolescents. Six hundred pregnant or parenting adolescent women received intensive ongoing care either through special clinical programs or in schools, under the auspices of the adolescent program. The program also conducted educational sessions that were attended by 12,787 persons, and answered 7,562 phone calls for counseling purposes.

Services to Handicapped Children

The primary goal of the Services to Handicapped Children is the identification of handicapped children at an early age so that they may have an opportunity to develop to their greatest potential. To achieve that end, the Division established two units:

- The Services for Handicapped Children's Clinic Programs Unit provided or contracted for services to approximately 9,000 children with many handicapping conditions: orthopedic, neurologic, cardiac, plastic, orofacial anomalies, myelodyplasia, hemophilia, cystic fibrosis, and inborn errors of metabolism. During the fiscal year, about 1,500 new patients were admitted to the various clinics for a total of 20,000 clinic visits. Two new clinics were opened during the year—an orthopedic clinic at the Fairview Hospital in Great Barrington, and a developmental clinic at the Leominster Hospital.

The Division also began a comprehensive evaluation of services that will result in a reorganization of the administrative, as well as service, aspects of the unit. Administratively, the goal will be to strengthen the prerogatives of the Regional Health Offices in the development and provision of clinic services. As part of this approach to the delivery of services, the Division developed new financial guidelines that put increased emphasis on family participation for those able to contribute financially toward the care of their children. The guidelines will be implemented in the next fiscal year. Discussions with representatives of Blue Cross resulted in an agreement under which Blue Cross will reimburse Services to Handicapped Children for drugs provided to covered patients with epilepsy or cystic fibrosis. A clinic system was established for the phenylketonuria (PKU) clinic at the Children's Hospital Medical Center for the collection of third party benefits where applicable.

- The Community Services Unit provides a range of specialized services to multiply handicapped children to allow them to function as independently as possible and to remain in the community with their families. The Division purchases services from appropriate agencies to reinforce the family's ability to nurture multiply handicapped children from birth up to age 21. During the year, 97 children from 92 families received home care service; 257 received long-term residential care; and 32, respite care in pediatric nursing homes.

Because services to the multiply handicapped child are frequently provided by more than one state agency, the Division of Family Health Services continues to function as a referral source. During the year, 103 requests for pediatric nursing home care

came from the Department of Mental Health, the Department of Public Welfare, the Division of Special Education, and from 16 other referral sources.

PREVENTIVE MEDICINE

Created in fiscal year 1977 to serve as the focus of the Department's program to enhance the health status of the Commonwealth, the Division of Preventive Medicine has identified six major program areas for development: early identification of hypertension and intervention, nutrition, accident prevention, substance abuse, occupational health, and dental health. A strong component of all Division-supported services and activities is the evaluation of process and outcome to determine effectiveness.

Public Education and Information

After sponsoring a successful program on child automobile safety early in fiscal year 1980, Division staff, in conjunction with the Governor's Highway Safety Bureau, secured funding from the United States Department of Transportation to establish a Child Passenger Safety Resource Center. In its first three months of operation, the Center collected and reviewed all existing materials on child passenger safety, and selected well-prepared printed and audiovisual materials for distribution. The Center surveyed all hospitals with maternity units in the state and offered them inservice education on the issue of child passenger safety. In addition, three target groups were identified for continued work in the coming year—day-care center personnel, staff pediatricians, and pediatric nurses.

The Massachusetts Nutrition Resource Center, a joint project of the Division of Preventive Medicine and the Frances Stern Nutrition Center of Tufts New England Medical Center, provided informational and educational services to both the public and health professionals. During the year, the staff of professional nutritionists answered over 2,600 mail and phone inquiries on a wide range of common and highly technical questions.

A highly successful poster campaign that stressed the need for public awareness of high blood pressure and its control was completed during the year. The posters, the art work of elementary school children across the state, were judged competitively. The winners were honored at a State House ceremony attended by the Governor and the Commissioner of Public Health. The winning posters were printed as a High Blood Pressure Calendar, 35,000 copies of which were distributed to residents of the Commonwealth.

To use existing health promotion materials more effectively and to benefit from the experience of other states in the delivery of preventive services, Massachusetts became part of the newly formed Tri-State Health Consortium with Connecticut and Rhode Island. The three states have met regularly to share program concepts, materials, and resources. The first jointly prepared pamphlet, "Shake the Habit," aimed at reducing the intake of salt. More than 50,000 copies were distributed in Massachusetts. Coordinated activities of the Consortium promise to yield more effective programming at a minimum increase in cost.

Community Services

The Division of Preventive Medicine's hypertension screening and follow-up program, now in its third year, expanded in fiscal year 1980 from nine to 13 projects at 97 sites in various cities and towns throughout the Commonwealth. More than 11,000 persons were screened for high blood pressure. Many of those identified as hypertensive had been unaware of their condition. The projects made appropriate referrals for treatment and followed the people in their treatment plan. The Division plans to expand the network of screening programs in the next fiscal year with additional funds from the United States Public Health Service. Particular attention will

be paid to workplace settings as project sites.

Antismoking programs of the Division were targeted at adolescents and the general smoker. The school-based programs, carried out by local school administrations, aimed at the prevention of smoking by this vulnerable age group. The curriculum provided factual information as well as techniques to enable a teenager to resist peer pressures to smoke. Approximately 4,700 adolescents took part in the programs provided through contracts with 13 school systems.

A two-session workshop entitled, "How to Quit Smoking On Your Own," was developed and presented by Division staff. Workshops at some of the public health hospitals were offered to 170 adults during the year. Unable to meet the continuing demand for such programs, the Division began to develop materials and procedures to enable local sites to offer the program without dependence on support from the Division.

As part of its program of preventive dentistry, the Division continued its school-based flouride mouth-rinse program in 10 elementary school systems in the state. Over 20,000 children participated in the programs in communities that were not receiving fluoridated water.

Research and Evaluation

The research and evaluation unit of the Division completed a number of research projects and evaluations. The dental health status of school children in Boston was assessed through a comprehensive arrangement with the Forsyth Dental Research Center. The survey of over 2,400 children in grades one through 13 provided important baseline data on the needs for dental care of the children in Boston. The data will be combined with data from a broader survey of the oral health of school children in Massachusetts, the first such study since 1951, to be completed in fiscal year 1981. Information from the study will permit comparison of the rate of caries among the children living in communities with fluoridated or non-fluoridated water supplies.

The research and evaluation unit concentrated on developing baseline data for the assessment of the Division's smoking-cessation and school-based fluoride mouth-rinse programs. Training workshops in evaluation design and strategy were prepared for different groups, within and outside the Department. Several Division-based research projects in hypertension received national recognition as exemplary studies of protocol in the identification of hypertensives. In addition, the unit has begun to design the research methodology for several studies planned for the next fiscal year.

Interagency Coordination and Program Planning

Responding to federal directives for health education and risk reduction, the Division assumed responsibility for the formation of a statewide Task Force on Prevention. Members of the task force represented health planning agencies, the State Health Coordinating Council, health promotion and disease prevention groups, and other divisions of the Department of Public Health. The goal of the task force was defined as the coordination of preventive efforts throughout the Department and across many planning levels. During its initial meetings late in the fiscal year, the task force identified some important objectives: a statewide inventory of existing health promotion services and resources, the review and selection of community-based projects for inclusion in the Division's federal grant application to the Center for Disease Control, and an assessment of economic incentives for health promotion.

TUBERCULOSIS CONTROL

The Division of Tuberculosis Control is the single agency responsible for the surveillance of tuberculosis in the Commonwealth, as well as for the development of programs to control and eradicate the disease. To this end, the Division promotes many activities, either directly, by contract, or in collaboration with local boards of health, hospitals, and physicians.

In November 1979, the Division was host to a meeting of national significance on tuberculosis cosponsored by the Department and the Center for Disease Control and supported by the Massachusetts Health Officers Association. For four days, symposium participants reexamined the fundamental concepts and basic issues in the control of tuberculosis, and established new directions for public health programs. A summary of the Symposium Report with goals, objectives, strategies, and performance standards for the control of tuberculosis will appear in the Department's column in the *New England Journal of Medicine,* issue of October 2, 1980.

The Division began to implement the recommendations of the Symposium in several areas:

- Development of a project in conjunction with the Department's Data Processing Section to automate the State Tuberculosis Case Register.
- Informational meetings with tuberculosis clinic physicians, and consultations with the Division's Medical Advisory Committee to develop standards for short-course chemotherapy and intermittent regimens designed to improve treatment compliance.
- Increased emphasis on epidemiology through the recruitment of two new nurses, a redefinition of duties and area assignments, and the collection and tabulation of additional performance data on cases and contacts.

In calendar year 1979, the number of newly diagnosed cases of tuberculosis reported in Massachusetts declined by 17.9 percent —476 cases as compared to 580

in 1978. The 1979 case rate also showed a decline from 10.2 per 100,000 population to 8.19 to move Massachusetts from 29th to 30th position (50th position, lowest) among all states. Among states with high-density urban areas, Massachusetts followed only Ohio for lowest case rate. The case rate in Massachusetts has maintained a constant, gradual decline over the past two decades (Fig. 1), although case rates in urban areas, such as Boston, Cambridge, Fall River, New Bedford, Springfield, Worcester and the Lowell-Lawrence area, remained higher than the state average.

The Division of Tuberculosis Control continued to emphasize reduced hospitalization and early ambulation of tuberculosis patients. The Division provided, by contract, more than 9,000 patient days of care in 10 general hospitals. The Division also provided approximately 30,000 outpatient visits under contract with 44 community hospitals throughout the Commonwealth. In addition, almost $300,000 worth of tuberculosis drugs, purchased on contract, were delivered to tuberculosis clinics to provide treatment and preventive therapy. Local boards of health, clinics, and neighborhood health centers received supplies for about 80,000 tuberculin tests.

The Division processed notifications from the Center for Disease Control on the health status of classified aliens with tuberculosis or suspect, and of a large number of nonclassified aliens from Indochina. Follow-up services and clinical evaluations were ensured for all classified aliens. The many Indochinese refugees entering the state, an estimated 400 per month, has created a large backlog of tuberculosis-screening verifications. The problem may be alleviated with the aid of a proposed Federal Project for Refugees and the expansion of the Division's data processing project in the next fiscal year.

Figure 1. Massachusetts New Tuberculosis Case Rate per 100,000 Population. 1962-1979.

N.B. The apparent increase in rate, starting in 1975, reflects a change in reporting to include reactivated cases with new cases, rather than a true increase.

REGIONAL HEALTH OFFICES

The scope of activities of the Department is reflected in the local health services provided by the four regional health offices in the state. These offices coordinate the Department's general field activities and act as intermediaries between central service programs and local health agencies and citizen groups. Local health agencies receive help either by consultation or by direct assistance in their programs. Activities of regional health office staff include school and personal health services, application of the State Sanitary Code, and planning. As representatives of the Commissioner, the regional health officers inform the Department of the local political, demographic, and social changes in, as well as the health needs of, their regions.

Each regional health office operates a network of Handicapped Children's Clinics and reviews and monitors contracted programs of the Divisions of Family Health Services and Preventive Medicine. Staff members serve on the Regional Review Board and Advisory Council of the Department of Education, and on the Interdepartmental Team of the Office for Children. Regional staff members also provide in-service educational programs for local nurses, sanitarians, nutritionists, physical therapists, social workers, and members of local boards of health.

Although the emphasis may be slightly different in one or another regional office, each office, to the extent that staff and resources are available, does participate in these activities. Some examples from each region indicate the multifaceted activities of all the regional health offices:

- Central Region—Staff completed several immunization surveys of children in day-care centers, children in kindergarten, new children entering school, and validation of school immunization records. Analysis of the re-

sults showed that almost 100 percent of the children surveyed were immunized against the seven immunizable diseases. The Central Region had an outbreak of Kawasaki disease—five children were stricken with this rare illness. The dental health program emphasized the reduction in the incidence of dental caries. Ten communities participated in the Fluoride Mouth-Rinse Program that reached over 3,000 school children.

- Northeastern Region—Public health nursing advisors continued to provide educational opportunities for nurses in community agencies. About 200 nurses attended five different programs during the year. Technical assistance and consultation were provided to local boards of health and home-health agencies on request. Two home-health agency grants were awarded to the Cambridge Visiting Nurse Association, to become operative in the new year.
- Southeastern Region—The Postural Screening Program for Scoliosis expanded into five new school systems including the Cities of Attleboro and New Bedford. Additional screening review sessions were organized in the Lakeville and Norfolk County Hospitals and the Parmenter Health Center for nurses and physical education instructors already involved in the program. Ten new disease prevention/health promotion programs were funded in local communities to bring the number supported by the Division of Preventive Medicine to 13. A protocol for management of the local projects and contracts were developed jointly by central and regional office staff.
- Western Region—Staff from the Services to Handicapped Children's Program participated in the development of a coordinating council of all area agencies that serve handicapped children. In addition, the regional office's public health nursing advisor organized a four-day workshop on Care of Children with Special Needs in a School Setting, held at the Shriver Center in Waltham. After a year of planning and meeting with the Regional Health Officer and other staff, Belchertown and Ware, towns in Hampshire County, officially formed the Quabbin Health District to hire and supervise jointly a health officer, clerical worker, and laboratory. In the new district, each board of health will retain full autonomy. A cost-sharing grant was awarded to the two towns by the Department.

DENTAL HEALTH

The appointment of a new Director of Dental Health in February 1980 led to a reassessment of the goals and objectives of the Division of Dental Health. A number of traditional dental public health projects were revitalized, some new measures begun, and steps taken to coordinate dental activities of other divisions with, or to consolidate them into, the Division of Dental Health.

During the past 10 years, the Division had staffed the Dental Review Board of the Department of Public Welfare's Dental Medicaid Program. In fiscal year 1980, the board reviewed 20,150 surgical claims with a total value of $474,342. Review of these claims resulted in a reduction of $122,342, representing 25 percent of total dollar volume. Over 90,000 prior approvals were also processed. At the end of the fiscal year, the system for professional review was transferred to the Department of Public Welfare.

The Division was thus able to redirect its resources toward other programs. During the last four months of the fiscal year, the Division initiated preliminary activities in the following areas:

- *Fluoridation*—In conjunction with the Environmental Health Section, the Division established the Massachusetts Fluoridation Resource Center in March 1980. The Resource Center assumed responsibility for a statewide public awareness program on the benefits of fluoridation, as well as for technical assistance to communities interested in fluoridating their water supplies. Through the Center's efforts, seven Massachusetts communities with a combined population greater than 250,000 decided to implement fluoridation, and will receive the necessary funds to do so during fiscal year 1981 through a federal grant administered by the Department. Data indicate that once the full benefits of fluoridation are available for the 3,000,000 residents of the Commonwealth who are on fluoridated public water supplies, $36,000,000 in potential dental bills will be saved annually.

- *Local Boards of Health*—The Department reaffirmed its support of local dental health projects, a support that had diminished during the past 10 years. The Division began reexamining its role in support of these projects, many of them school fluoride mouth-rinse programs, funded either locally or by the Department. In fiscal year 1981, the Division will begin technical assistance to the 58 local boards of health with dental programs.

- *Assistance to Other Divisions and State Agencies*—The Division was available for consultation and advice to other divisions in the Department and to other state agencies.

- *Research in Dental Public Health*—The Division of Dental Health carried out three research projects to assess dental public health needs, appropriate methods of prevention, and utilization of resources. A committee convened by the Director advised the Board of Registration in Dentistry on what questions to ask on the

Table 1.
Percentage of Immunized Children Entering Kindergarten
1973-1980.

	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	Percent Increase Over 1973-74
Diphtheria, Tetanus, Whooping Cough (DTP)	88.60	93.51	95.04	96.21	95.82	96.99	97.57	10.12
Polio	86.20	92.04	94.10	95.84	94.25	97.50	97.95	13.63
Measles	90.30	93.53	94.60	96.21	98.32	98.60	98.86	9.48
Mumps	59.30	69.19	78.00	84.56	89.93	92.79	98.69	66.42
Rubella	62.00	70.41	78.51	84.35	90.04	93.32	98.67	59.15

biennial dental relicensure form. Results of this first survey of dental practice in Massachusetts will be reported in fiscal year 1981. A second project studied the use of vitamins containing fluoride by the children in the Medicaid population. Results indicated that only enough fluoride was being prescribed to cover approximately 6 percent of the children. A final project studied the cost of dental education in Massachusetts and its effects on the future supply and distribution of dentists in the state.

- *Education of Dental Health Professionals*—The Department reinstituted its training program for dental students and dentists in public health, and assigned two undergraduate dental students to work on various projects in the Division.

COMMUNICABLE DISEASE CONTROL

The Division of Communicable and Venereal Diseases, which reports directly to the Commissioner of Public Health, carries out health protection activities that are the direct responsibility of state government. These encompass health surveillance and disease control to guard the health of the people of the Commonwealth through testing, vaccination, treatment, analysis of disease trends, and assessment of threats to the population.

COMMUNICABLE DISEASE CONTROL

The statewide immunization programs of the Department, which expanded as new vaccines became available, continued to record progress in controlling measles, mumps and rubella:

- Measles down from 19,612 cases in 1965 to 15 cases in 1979, a decrease of over 99 percent.
- Mumps down from 9,024 cases in 1968 to 192 cases in 1979, a decrease of 98 percent.
- Rubella down from 1,461 cases in 1969 to 491 cases in 1979, a decrease of over 66 percent.

These programs not only prevented illness and death but saved the Commonwealth approximately $14,000,000 in actual costs for medical care and institutionalization of patients.

Massachusetts, which has been on a maintenance immunization program against polio since polio vaccine became available, has not had a single reported case of polio since 1968. A total of 476,927 doses of trivalent Sabin oral polio vaccine were administered by local boards of health, private physicians, clinics and hospitals. The annual immunization survey of children (68,988) entering kindergarten showed more than 97 percent in 1979 had already received three or more doses of polio vaccine. The percentages of these children immunized against polio and the six other immunizable diseases all showed impressive increases over 1974 (Table 1).

During the 1979-1980 school year, the Division of Communicable and Venereal Diseases also surveyed the school health records of 39,335 new children entering grades one to 12 in both public and private schools. Immunization levels for these children were as follows: DTP, 98 percent; polio, 98 percent; measles, 99 percent; mumps, 89 percent; and rubella, 91 percent. The Division continued its survey of children (58,922) in day-care centers and found substantial increases over the previous year:

Percent Immunized.

	1975-76	1977-78*	1978-79	1979-80	Percent Increase Over 1975-76
DTP	86.73	90.99	94.23	95.60	10.23
Polio	85.71	89.83	94.91	96.13	12.16
Measles	89.31	93.22	95.83	96.79	8.38
Mumps	77.27	85.93	92.78	96.28	24.60
Rubella	76.00	85.36	92.46	96.27	26.67

*No survey had been conducted in 1976-1977.

Recent improvement in the rubella immunization level of children in Massachusetts has resulted in rubella becoming a disease of adults. Of the cases reported in 1974, 20 percent were of adults as compared to 78 percent in 1979. This trend will probably continue since more than 91 percent of children under 18 years of age are protected with the vaccine. The Division has, therefore, continued the rubella program for adults, initially targeted at four main groups: students in institutions of higher learning, persons 30 years of age and younger who provide patient care in hospitals and health facilities, students and staff in schools of nursing, and patients in obstetrical-gynecological, and family planning clinics.

Through a grant of $218,809 from the United States Public Health Service, the Division launched an influenza immunization program for high-risk persons. During the flu season, 167,212 persons were immunized, a 15 percent increase over the number immunized in the previous year. The vaccine has proven to be reaction-free; no adverse reactions from the flu immunization were reported. Again, no association between flu immunizations and the occurrence of the Guillain-Barré syndrome was found in Massachusetts or elsewhere in the United States.

The results of the Commonwealth's public pneumonia immunization program for the elderly, carried out in the previous fiscal year, indicated that the vaccine was safe, cost-effective, and reduced mortality by 10 percent among the elderly who had contracted pneumonia. Because the pneumoccal vaccine is free from systemic reactions, the Division recommended simultaneous flu and pneumonia immunizations in different arms. This policy has been endorsed by the Massachusetts Medical Society and the United States Food and Drug Administration.

The reported incidence of babesiosis, a malaria-like illness for which no effective chemotherapy is now available, has been increasing. In Massachusetts, a focus of the disease exists on the islands of Nantucket and Martha's Vineyard. In fiscal year 1980, five identifiable cases were reported —three on Nantucket, one on Martha's Vineyard, and one, a Pembroke man. The latter patient acquired the disease in a transfusion, the first documented case in medical literature. The locale of the exposure of a sixth case could not be determined.

VENEREAL DISEASE CONTROL

Of the 14 sexually transmissible diseases, seven—gonorrhea, trichomonas vaginitis, monilial vaginitis, nongonoccocal urethritis and scabies—were epidemic in Massachusetts and in the nation. Massachusetts has about one and one-half cases of male gonorrhea to one case of nongonoccocal urethritis, which may soon become the number one venereal disease in the United States.

The 9,886 cases of gonorrhea reported in the calendar year 1979 represented a decrease of 11.5 percent from 1978 but constituted a 30.8 increase over the 7,481 cases reported a decade earlier. Gonorrhea continued to be the number one communicable disease in the state (Fig. 2).

For calendar year 1979, primary and secondary syphilis declined by 16.8 percent from 1978—344 cases in 1978 as compared to 286 cases in 1979—accompanied by an overall decrease of 1.8 percent in all stages of reported early syphilis, congenital and other types of syphilis. An important factor in the Division's control effort was the syphilis interview-contact-tracing procedure used by the Division's staff in the 21 state cooperating venereal disease clinics with 95 percent of the early syphilis cases reported to the Department of Public Health.

The Department's program for the screening of asymptomatic women for gonorrhea continued with the renewal of a federal grant for $535,640. During calendar year 1979, the program examined 152,694 women by culture at approximately 100 participating facilities. Of the women examined, 5,202, or 3.4 percent, were found to have the disease.

The grant also allowed the Division to continue its program for the diagnosis and treatment of gonoccocal pelvic inflammatory disease (PID). Protocols with standards for the diagnosis and treatment of the disease were instituted in over 30 hospitals located in areas of highest incidence. Measures for ensuring the rapid epidemiologic follow-up of contacts, many of whom are asymptomatic men, were established. During calendar year 1979, 396 cases of gonoccocal PID were reported.

The Department continued its three-pronged program of education, treatment, and control in its attack upon venereal disease. The

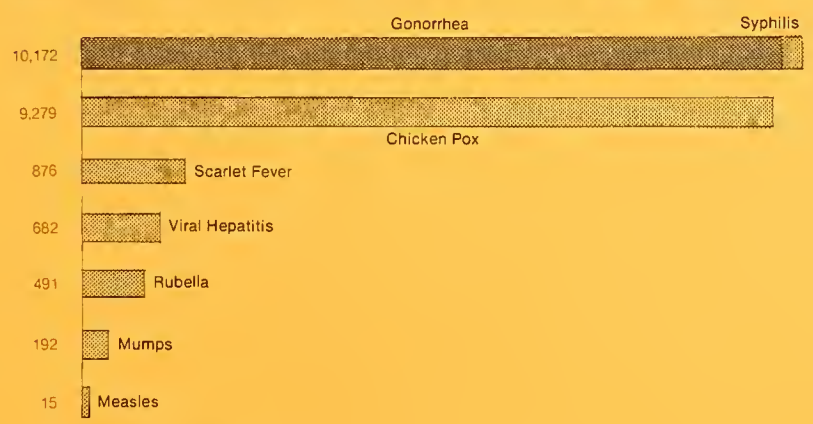
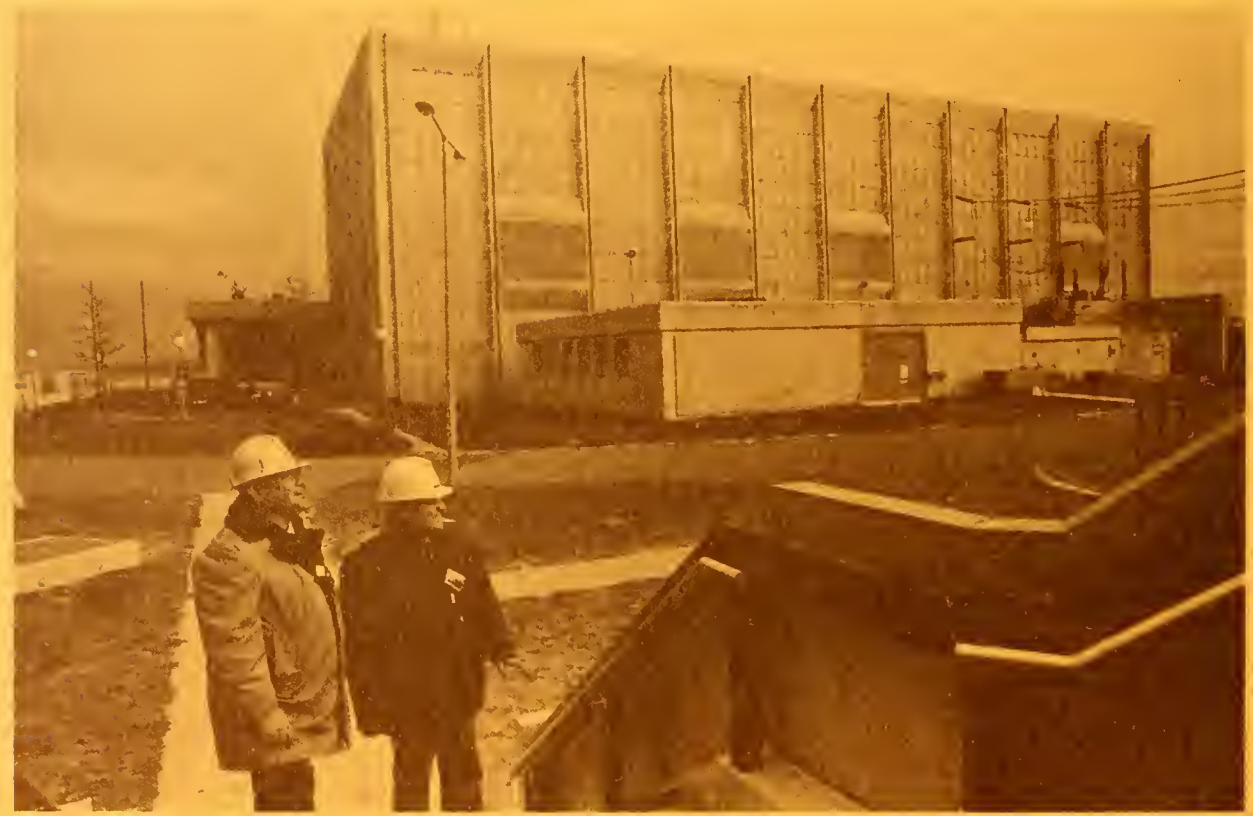


Figure 2. Communicable Diseases in Massachusetts, 1979.

21 cooperating state venereal disease clinics in the outpatient departments of general hospitals had 47,533 patient visits for examination and treatment during the fiscal year. The cost, which includes epidemiologic investigation, was approximately $25.95 per patient visit.

The Division provided clinical and epidemiological training to physicians from the Harvard School of Public Health, medical students from Boston University and Tufts University Schools of Medicine, and to nurses and nurse practitioners.



ENVIRONMENTAL HEALTH

The Environmental Health Section, which includes the Divisions of Radiation Control, Food and Drugs, Community Sanitation, and the Lead Paint Poisoning Prevention Program, works closely with the Department of Environmental Quality Engineering to establish standards for monitoring environmental hazards, to interpret engineering data and laboratory analyses, and to provide technical advice and expertise to the public.

Cognizant of the fact that environmental health will be a key concern in the next decade, the Department worked to strengthen the newly established Environmental Health Section. Budgetary constraints, however, prevented the employment of a full complement of toxicologists, epidemiologists, and pathologists. Despite these shortages, the Department sought to find the link between environmental agents and increases in deaths from certain diseases. With the cooperation of the Center for Disease Control and the National Institute of Occupational Safety and Health, the Department completed a medical case-control study of victims of childhood leukemia and of victims of liver and kidney disease in Woburn. Data on residential and medical histories of the victims and their families, school histories, environmental exposures, sources of drinking water supplies, and hobbies were collected. Statisticians and environmental health professionals were studying the data to determine the link between any of the factors and diseases. The report will appear in fiscal year 1981.

Cancer mortality data were also studied for the municipalities of Acton, Bedford, New Bedford, and Pittsfield after the residents had been exposed to either water polluted with organic chemicals or environmental agents such as polychlorinated byphenyls (PCBs).

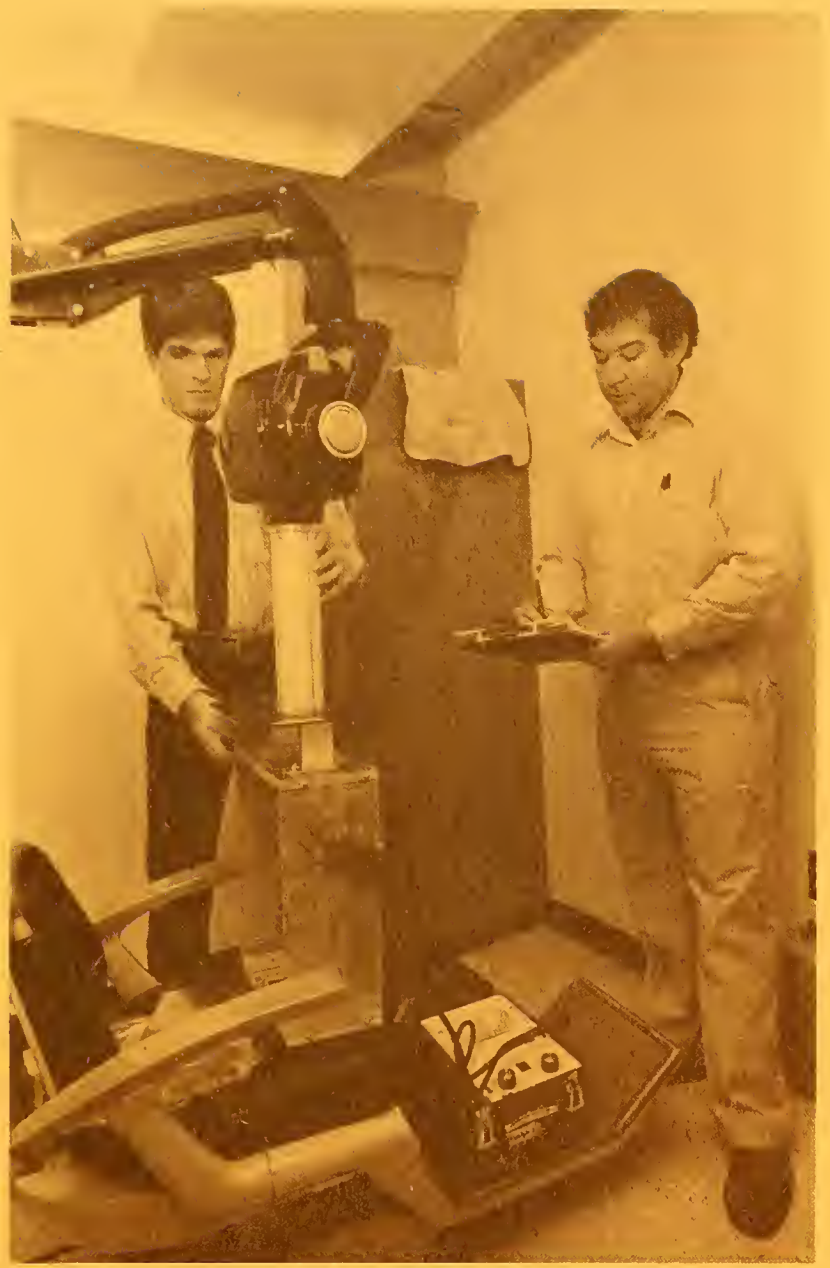
In November 1979, the Department banned the use of urea formaldehyde foam as an insulating material in homes. Homeowners had complained of respiratory difficulties, eye and skin irritations, headaches, nausea, nosebleeds and dizziness. At least 10 Massachusetts families were forced to abandon their homes due to the severity of the reactions. During the fiscal year, the Division of Food and Drugs tested 165 samples from homes affected by the presence of the foam. The concentrations of formaldehyde in

the homes ranged from 0.00 parts per million to 1.0 parts per million. Although no upper levels of safety have been established, recent test results reported by the Chemical Industry Institute of Toxicology indicated that formaldehyde is a potential causative agent for cancer in humans. The Department, by the end of the fiscal year, was working on regulations to indicate what procedures consumers must follow to have the foam removed from their homes and repurchased by the responsible parties.

The Department was represented on the Legislative Commission on Hazardous Waste, which was responsible for determining how sites should be selected for hazardous waste disposal. The Department stressed methods to safeguard the health of the residents in the vicinity of disposal sites and insisted that local officials have a voice in determining the location of a site.

The Department continued to serve on the Pesticide Board, which formulates pesticide policy for the state. During the past year, several communities have questioned the use of certain pesticides in their towns. Although the Department had determined from available mortality records that the public's health was not affected by the use of these pesticides, it maintained its watch on the use of pesticides to avoid unnecessary exposure to potential carcinogens.

As a member of the Special Legislative Commission on Asbestos, the Department was instrumental in obtaining funds for the removal of asbestos from public buildings, including schools. By the end of the fiscal year, the Department was investigating the need for regulations to protect the public when asbestos is removed.



RADIATION CONTROL

The Radiation Control Program, which is responsible for the protection of public health from all sources of radiation, carried out surveys of diagnostic and therapeutic X-ray units in hospitals, private medical and dental offices, and of nuclear medicine departments in hospitals and educational institutions. Surveys were conducted at universities, secondary schools, and other institutions that are registered to use radioactive material. Program personnel also surveyed color TV receivers, microwave ovens, video display terminals, devices that use lasers, and many consumer products that contain radioactive material. Because many of these devices produce nonionizing radiation, rules and regulations of the Department were modified to include nonionizing, as well as ionizing, radiation control.

A major activity of the program is extensive environmental surveillance and inspection of fixed nuclear power stations. Personnel visited sites every two weeks to ensure the proper operation of monitoring equipment. Thermo-luminescent dosimeters to

check the data received from the power companies were placed around each reactor and changed monthly.

Personnel have been trained to respond to radiation emergencies, and plans for such a response have been coordinated with federal, state, and local personnel.

Staff of the Radiation Control Program, responsible for responding to radiation accidents and incidents throughout the Commonwealth, served as the principal coordinators of the Nuclear Incident Advisory Team (NIAT) and participated in monthly training sessions. NIAT includes consultants from academic and industrial institutions throughout the Commonwealth.

The Radiation Control Program maintained responsibility for approving plans for radiation protection for all facilities involved in construction, alterations or reconstruction. Surveys for these facilities are conducted after completion of the work. Additionally, personnel served as primary radiation control experts to other state agencies such as, the Departments of Environmental Quality Engineering, Energy, Public Safety, and Transportation, and the Civil Defense Agency.

In cooperation with the Bureau of Radiological Health of the Federal Food and Drug Administration, the Radiation Control Program initiated a campaign to make consumers aware of their responsibility to inform physicians and dentists of their past X-ray history. The program also worked to inform the public of the benefits and risks of X-ray treatment.

The participation of the Radiation Control Program in the New England Radiological Health Compact permits the Department to cooperate with the other five New England States in radiation health activities.

LEAD POISONING PREVENTION PROGRAM

The Department's Childhood Lead Poisoning Prevention Program provides screening for children who are at risk, identifies and works to eliminate lead hazards in the environment, and conducts educational programs for both the medical and lay community on the health hazards of lead. During fiscal year 1980, the laboratory of the program processed more than 95,000 specimens for lead toxicity—an 8 percent increase in volume over 1979. Of the approximately 80,000 children screened, 5,000 (6 percent) had elevated levels of lead in their blood.

Staff of the Childhood Lead Poisoning Prevention Program inspected dwellings of all children under the age of six with evidence of lead toxicity, and any home of a child under the age of six upon request by a parent or guardian. Increased public awareness of the problem of lead toxicity resulted in increased requests for housing

inspections, which outdistanced the field staff's capacity to assist in confirmation, referral for treatment, and hazard abatement. Staff has, therefore, enlisted the support of local boards of health in the inspection process. Inspectors of the program have been training local code enforcement inspectors in lead poisoning prevention and lead paint inspection procedures.

In cooperation with the United States Department of Health and Human Services, the Childhood Lead Paint Poisoning Prevention Program has been working to coordinate screening activities with federally-funded child health care programs. Representatives from WIC and the Early Periodic Screening, Diagnosis, and Treatment (EPSDT, known as Project Good Health in Massachusetts) Program, and the Lead Paint Poisoning Prevention Program have met to draft plans. The Office for Children has also expressed support.

Data collection has been a high priority for the program. A new data management system was in the planning stages by the end of the fiscal year. When operative, the system will provide accurate data for evaluation of the needs and accomplishments of the program, as well as data for transmittal to local boards of health.

DIVISION OF FOOD AND DRUGS

The Division of Food and Drugs is responsible for protecting the public from the harmful effects of chemicals and pesticides, adulterated foods, unsterilized bedding and upholstered furniture. The Division is also responsible for the registration of pesticides, the licensing of cold storage warehouses, bedding, upholstered furniture and stuffed toys, out-of-state soft drink and frozen dessert plants, manufacturers of methyl alcohol, manufacturers of narcotic drugs and vending machines, sellers of hypodermic needles and syringes, the licensing of meat and poultry establishments, and the registration of renderers and manufacturers of animal food.

When the quality of products is not maintained and regulations bypassed, the Division has the power to revoke licenses and suspend operations. During the past year, the Division held 263 hearings resulting from inspection of food and drug establishments. Violations did not, in all cases, constitute a health hazard. The Division also investigated approximately 600 complaints from consumers concerning food, drugs, and hazardous substances.

The Division's laboratory analyzed products brought in by the Division's inspectors, as well as materials submitted by any regulatory agency for specific analysis used for enforcement of legislation. The laboratory also made analyses for charitable organizations with regulatory authority. The Division cooperated with the Massachusetts Departments of Food and Agriculture, Public Safety, Education, and Natural Resources, and the Consumers' Council in programs of mutual interest.

Division inspectors permanently stationed at the fish piers in Boston, Gloucester, and New Bedford ensured the wholesomeness of all fish coming into the main piers of Massachusetts. During the fiscal year, the Division made 16,416 inspections, exclusive of inspections for paralytic shellfish poison, and collected 2,044 samples of various seafoods for analysis. The Division also monitored all market samples of shellfish to guarantee that no shellfish contaminated by *Gonyaulaux tamarensis,* the paralytic toxin, reached the public. Seafood samples collected from the New Bedford area showed trace levels of contamination by polychlorinated byphenyls. Lobsters collected from the outer harbor did not show excessive levels, but lobstering in the inner harbor continued to be forbidden.

The facilities of the Division's laboratories both in Boston and Amherst were overtaxed by demands for analysis of drugs submitted by law enforcement agencies. The Division analyzed 110,000 samples in fiscal year 1980, an increase of 69 percent over the 76,000 samples in 1970. The Division noted an increase in the use of all illicit drugs, but the greatest increases were in the use of heroin, cocaine, and phencyclidine (PCP, commonly called angel dust).

Under the provisions of Chapter 111, Section 200, of the Massachusetts General Laws, burn injuries that affect 5 percent or more of the surface area of the body must be reported to the Division. During fiscal year 1980, the Division received reports of 923 injuries and four deaths. The greatest number of injuries, 317, were

attributed to water and other liquids; three of the deaths were the result of burns by direct flame. An interesting statistic was the absence of any reports of injury or deaths related to fabrics. This may be the result of the passage of the Flammable Fabrics Act.

COMMUNITY SANITATION

The Division of Community Sanitation was awarded a $160 million federal grant to implement fluoridation programs in the Commonwealth. As a result, the City of Gloucester and the Town of Canton were able to purchase and install fluoridation equipment; and the City of Haverhill and the Town of Weymouth, to upgrade their fluoridation equipment. Two towns, Bedford and Marlboro, took initial steps to institute a fluoridation program.

Sanitarians in the Division responded to an increased number of complaints and inquiries about violations of the State Sanitary Code concerning residential housing. The Division worked closely with local boards of health to resolve the problems. In some cases, the Department had to take direct action to ensure enforcement of the code.

Throughout the year, Division sanitarians inspected all state and county correctional facilities at least twice. The Department declared the Deer Island House of Correction unfit for human inhabitation because of the many health and safety problems observed there. During the summer months, the sanitarians inspected approximately 10 percent of the recreational camps in the state. Other activities of the Division included the follow-up of general nuisance complaints, and those relating to rodent control, farm labor camps, and subsurface sewage disposal.

The Division worked closely with othe divisions of the Department, and with other state agencies including the Office of the Attorney General, the Secretary of State, the Office for Children, and the Department of Public Welfare.

HEALTH SERVICES

Through the operation of its seven public health hospitals, the Department has been able to supplement existing resources on a statewide basis and to assume special responsibilities to ensure comprehensive health care to the community. The hospitals have worked closely with regional planning groups and community groups to develop programs for needed services that are not provided by voluntary or private hospitals, or by other health agencies. Detoxification and rehabilitation services are also available through the Department's community-based alcoholism programs. The State Laboratory Institute, through its three major divisions—Biologic, Diagnostic, and Newborn Screening—continues to provide many high-quality services to protect the health of the people of the Commonwealth.

HOSPITALS

The role of the seven public health hospitals in the overall delivery of health care in the Commonwealth has been under discussion for several years. Many services once provided only by these hospitals have been absorbed by the private sector. A major independent evaluation of the hospitals was completed in the fall of 1979. The study concluded that the hospitals, in general, play an important role in the delivery of health care in the state. The hospitals, therefore, continue to provide a broad range of clinical services to meet the needs of patients with long-term but remedial disabilities. These services are complementary to those provided by the private sector, and do not duplicate, or compete with, services available elsewhere. The hospitals' services and programs are briefly summarized.

• **Lakeville Hospital**—A 130-bed chronic disease rehabilitation facility located in Middleboro, in the southeastern region of the state, Lakeville Hospital has an inpatient census divided equally between pediatric and adult patients. Although the average inpatient census decreased by 1.4 percent in fiscal year 1980, the number of outpatient visits to the hospital's many specialty clinics increased by 24.9 percent. In addition to the clinics that emphasize physical and medical rehabilitation, the hospital's outpatient dental evaluation clinic provided services to handicapped persons in the community. Other programs included a spinal-cord injury evaluation clinic, a physical medicine clinic, and smoking cessation and weight-loss clinics. The 10-station renal dialysis unit, which serves as a regional resource, increased the number of treatments by 9.4 percent—from 5,527 in fiscal year 1979 to 6,047 in 1980. Lakeville's role as a regional resource expanded when the hospital became part of a multi-institutional planning committee for the delivery of health care in southeastern Massachusetts.

• **Lemuel Shattuck Hospital**—Located in the Jamaica Plain section of the City of Boston, the Lemuel Shattuck Hospital, a facility with 250 beds, provides inpatient care to patients suffering acute episodes of chronic illness, and outpatient follow-up. Medical and surgical services are provided to other state agencies, including the Department of Mental Health and the Department of Correction. The 75-bed medical geriatric unit serves former patients of the Boston State Hospital. The 15-bed medical correction unit operated at well over 100 percent occupancy, and negotiations were begun to expand the unit.

As a result of improvements in the delivery of outpatient services to former patients and to patients from neighborhood health centers and nursing homes, the number of outpatient visits in fiscal year 1980 increased by 4.9 percent from 24,751 in 1979 to 26,016. The renal dialysis unit increased the number of treatments by 9.1 percent—from 7,473 in 1979 to 8,224 in 1980.

Lemuel Shattuck Hospital was the recipient of a major, four-year grant of $600,000 from the Robert Wood Johnson Foundation to help fund an innovative chronic-care program for nonhospitalized patients. The Shattuck was one of eight hospitals in the nation chosen to participate. Working in cooperation with the Dedham Medical Associates, a 42-member private group practice, the Greater Roslindale Health Center, and the Roxbury Comprehensive Health Center, the program concentrated on patients with arthritis, diabetes, hypertension, pulmonary and heart disease and cancer. The concept of total health care integrated many health services—medical, nursing, psychological, social and rehabilitative—into the project.

At the end of the year, plans were completed for a new, outpatient geriatric program to serve both the elderly and their families in helping them to cope with the problems and changes that are part of the aging process. In addition, the hospital planned to open two long-term wards devoted primarily to difficult community patients and thus continue to move in the direction of a gerontology center.

• **Massachusetts Hospital School**—The Massachusetts Hospital School, located in Canton, is a unique institution that provides medical, educational, and restorative services to physically handicapped but intellectually able children up to the age of 21. The Hospital School continued to stress shorter lengths of stay and an acceleration of community-oriented programs. The trend of placing and keeping handicapped children in the community has increasingly resulted in a core population with more severe disabilities.

The School's continuing programs included the Cole Harrington Laboratory School, a day-care center for primarily able-bodied preschoolers, which provides practical child-care experience for students of the Hospital School. The Donovan House allowed students preparing to live independently in the community to participate in an on-campus, transitional housing unit. To strengthen the program, which has demonstrated its effectiveness over the past three years, the Hospital School took steps to lessen the abruptness of moving to and from the Donovan Living Experience.

The John J. Foley Outpatient Center, which has become a focal point for change within the Medical Services Division, grew with the addition of an alumni clinic. Plans were begun in 1980 to expand all services and to increase use of the outpatient clinic through a campaign directed at

the community.

As part of the program to improve the self-image and self-confidence of the students, the Hospital School consolidated all camping programs into Camp ALO (Adaptive Living Outdoors). Demand for participation in the program was greater than the places available. With the cooperation of the Norwood Comprehensive Employment Training Act (CETA) program, the social service department of the School obtained 15 CETA positions at the School for patients. Many departments had volunteered to do on-the-job training with the young people.

• **Pondville Hospital**—Pondville Hospital is a 104-bed institution, located in Walpole, that specializes in the treatment of cancer. Its multimodality treatment of the disease includes surgery, radiation, and chemotherapy.

The Diagnostic Radiology Department carried out three new special procedures during the year—transhepatic biliary drainage by-pass, percutaneous nephrostomies, and percutaneous gastrostomy. Hospital staff maintained active participation in the clinical studies of the Eastern Cooperative Oncology Group (ECOG) and the National Surgical Adjuvant Breast and Bowel Project (NSABP). The ECOG activity of the Tufts Oncology Group involved 10 hospitals, including Pondville, the New England Medical Center, Lemuel Shattuck Hospital, the Lahey Clinic and six community hospitals. Participation in clinical trials afforded patients the latest form of treatment, including drugs that are not yet commercially available. Other research continued in the causes and prevention of cancer, and in the role played by immunological factors in the development and treatment of cancer.

During the year, the Department, with the approval of the Legislature, made important advances towards the sale of Pondville Hospital. Despite its uncertain future, the hospital, which has experienced a steady decline in daily census, continued to provide excellent care and treatment to its patients.

• **Rutland Heights Hospital**—Located in the Town of Rutland, the Rutland Heights Hospital is a multipurpose facility that serves an adult population in the central Massachusetts region. During fiscal year 1980, the hospital directly operated 130 beds for Department of Public Health clients, and provided support services for an additional 80-bed psychiatric unit for the Department of Mental Health.

As part of its program of prevention, the hospital maintained a comprehensive health program for its employees and other groups. The program directed clients to the proper facilities and made available a directory of health-related information and services in the communities. The second aspect of the prevention program, the Adult Day Care Pro-

gram, served an adult population within a 10-mile radius of the hospital on an outpatient basis. The program provides an alternative, supportive setting for adults at risk of being institutionalized, as well as social and educational activities.

The rehabilitation program, which seeks to restore severely disabled persons to a higher level of functioning, provided an integrated system of medical, nursing, therapeutic, and support services through a team approach. The alcoholism treatment program, centered in a three-bed unit, offered rehabilitation to alcoholics who voluntarily requested treatment.

Most significant development in fiscal year 1980 at the Rutland Heights Hospital was the continued planning for the eventual move of the psychiatric unit. The unit will be transferred to the Worcester State Hospital as part of the Commonwealth's effort to consolidate underutilized state facilities.

• **Tewksbury Hospital**—Tewksbury Hospital, which has a bed capacity of 820, is the largest chronic disease, rehabilitation hospital in the state. It also operates a 225-bed program for homeless men, who are chronic alcoholics. Of the 280-bed medical component, 120 were assigned to care of former patients at the Danvers State Hospital. These are geriatric patients with both physical and psychiatric problems.

The major development at Tewksbury Hospital during fiscal year 1980 was the approval by the Public Health Council of the hospital's request to open 180 vacant beds. The beds will be used for patients from the community and from Danvers State Hospital and Metropolitan State Hospital. Use of the beds, which have been vacant since 1974, will raise the bed capacity to 1,000.

• **Western Massachusetts Hospital**—Located in Westfield in Hampden County, the Western Massachusetts Hospital offers long-term care of chronically ill adults, rehabilitation and alcoholism programs, and medical and surgical care of multiply handicapped children. The medical unit continued to provide care to patients with chronic medical conditions that require a higher level of care than what is available at a nursing home. Children admitted to the pediatric unit received either short-term care, extensive physical rehabilitation, or respite care. The alcoholism treatment program provided a 21-day multidisciplinary program for persons suffering from alcoholism or alcohol abuse.

The hospital's outpatient clinics offered a wide range of services to high-risk groups, underserved populations, medically

Table 2.
Public Health Hospitals
Annual Census Summary— July 1, 1979 - June 30, 1980.

Hospitals	Admissions	Discharges	Average Length of Stay	Average Daily Census	Patient Days	Outpatient Visits
Lakeville*	321	317	113.87	103.27	37,694	8,275
Lemuel Shattuck*						
Main	1,418	1,350	23.96	93.43	34,102	25,907
Geriatric	81	75	290.75	66.91	24,423	109
Mass. Hospital School						
Hospital	125	130	204.30	34.24**	12,499	1,850
Cottages				40.21**	14,676	—
Pondville	906	758	15.50	38.65	14,109	15,958
Rutland Heights						
Main	361	335	117.48	115.55	42,177	1,517
Psychiatric	87	89	295.61	76.13	27,788	—
Tewksbury						
Main	254	65	1,141.73	788.27	287,718	—
Homeless Men	102	95	577.61	150.34	54,873	—
Western Mass.	545	510	50.97	76.39	27,882	12,405
TOTALS	4,200	3,724	—	—	577,941	66,021

*The dialysis units at Lakeville and Shattuck Hospitals provided 6,044 and 8,224 treatments (including home dialysis) respectively.

**Low census reflects policy of the Massachusetts Hospital School to allow patients to go home for holidays, weekends, and vacations.

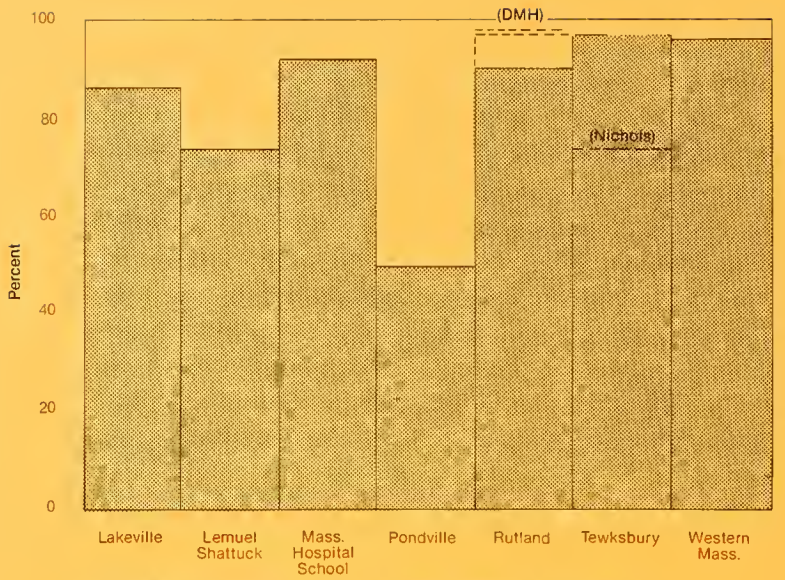


Figure 3. Percent of Occupancy in Department of Public Health Hospitals, July 1, 1979-June 30, 1980.

indigent persons, and clients of other state and local human service agencies. The adult day-care program, in operation since 1975, provided many activities to physically disabled adults to help avoid institutionalization.

Western Massachusetts Hospital also provided space and support services to a number of programs operated by other state agencies, by cities, towns or counties. The hospital has thus developed into a multiservice center.

The seven hospitals admitted 4,200 patients during fiscal year 1980, a decrease of 206 (4.6 percent) from 1979. The average length of stay varied from 15 days at Pondville to 1,141 days at Tewksbury. The number of outpatient visits — 66,021 — represented an increase of 8,634 over 1979, an indicator of the emphasis on more and improved ambulatory care programs (Table 2). Percent of occupancy in the seven hospitals is shown in Figure 3.

As part of the Department's total public health effort, the seven hospitals continued to expand training of physicians and paramedical personnel. Lemuel Shattuck, Pondville, Tewksbury, and Western Masschusetts Hospitals graduated about 150 licensed practical nurses from their accredited schools of practical nursing.

DIVISION OF ALCOHOLISM

The Division of Alcoholism strengthened activities for building its network of prevention resources, both regionally and statewide. During fiscal year 1980, the Division funded four additional regional primary prevention centers with funds appropriated by the Legislature, to bring to eight the number of centers now offering services throughout the Commonwealth. More programs and planning resources were developed to meet the needs of women, youth, and minorities. The Division contracted with an advertising agency to develop television commercials about alcohol abuse among women. The campaign was designed to publicize both existing statewide services for women and recently funded programs for women with dependent children.

In the area of secondary prevention, the driver alcohol-education program offered a structured, group educational series for persons arrested for driving under the influence of alcohol. Over 17,000 clients were referred to these programs in fiscal year 1980. The Division continued its commitment to the state's employee assistance program as a means of early identification of potential alcoholics. Over the past year, more than 150 state employees received clinical services. Legislative action made possible an upgrading of support for four-day treatment programs for women, which encompass both treatment and early identification. A 30 percent increase in basic funding allowed additional outreach activities and staff refinements.

The Division continued to fund seven programs targeted at the identification and treatment of youths with drinking problems. The programs provided education, intervention counseling, and advocacy. Almost 6,000 young people received alcohol education.

In addition to the regular programs directed specifically to the state's minorities, the Division organized the Hispanic Alcoholism Planning Project to develop data on the needs of the Hispanic community, and to prepare training and educational materials for use in minority programs. The Special Populations Resource Center, planned during the fiscal year, will begin functioning in fiscal year 1981.

The Division continued to support the statewide system of 20 detoxification facilities and initiated the development of a 21st center in Franklin County. The Division also maintained its support of 45 halfway houses, 30 outpatient programs, and a pilot, short-term, intensive rehabilitation program. Funding for the state-supported programs increased to approximately $15,000,000.

STATE LABORATORY INSTITUTE

The high quality of services provided by the State Laboratory Institute has been built upon a long tradition of research and development, a tradition that continued strongly during the 1979-1980 year. Staff of the Institute contributed extensively to the development of new disease-control policies now emerging as a result of technical advances. Work with other scientists under the auspices of organizations such as the National Institutes of Health and the Center for Disease Control provided a valuable exchange of ideas. Activities of the State Laboratory Institute fall into the following categories:

- Research and development of new technology
- Performance of a variety of tests on more than one million specimens for clinical diagnostic purposes
- Production and distribution of serums and vaccines for use throughout the year
- Diagnosis of rare or exotic disease
- Establishment of new diagnostic tests.

BIOLOGIC LABORATORIES

The changing patterns of need and availability of vaccines and other biologics has stimulated a continuing reappraisal by the Biologic Laboratories of the most effective contribution the facility could make. Goals being pursued were: to ensure the availability in Massachusetts of vaccines of proven efficiency; to enhance acceptance of such vaccines through improvements leading to decreased reactivity, increased potency, or both; and to provide unique biologic products for critical needs of special groups of patients whose numbers are insufficient to attract the interests of large commercial organizations.

During the year, major improvements in the blood fractionation facility permitted a great increase in the efficiency of extracting hepatitis-free blood substitutes and special immune globulins. A specific immune globulin, varicella-zoster immune globulin, for prevention of overwhelming chickenpox in children with leukemia, was nearing the final stages of federal licensure after extensive clinical trials.

DIAGNOSTIC LABORATORIES

Bacteriology Laboratory

The 185,380 specimens submitted to the Bacteriology Laboratory represented an increase of nearly 10 percent over fiscal year 1978, and an increase of 6.5 percent over 1979. Some of the increased productivity resulted from the transfer of throat culture tests to the Bacteriology Laboratory after the closing of the Department's Amherst Laboratory. Several new services, however, such as the "rapid" direct immunofluorescence for Legionnaire's disease, and testing for botulinal toxin in stools from infants with sudden death syndrome, increased productivity (Table 3).

The Throat Culture Program processed 111,035 specimens, an increase of 12 percent over the previous year. The streptoccocal laboratory at the Worcester Health Department, which was closed on June 30, 1980, for lack of economic feasibility, will be assumed by the Bacteriology Laboratory.

The Gonorrhea Control Program reported approximately the same volume of cultures as last year. The positivity rate was 5.0 percent, up 0.2 percent from the previous year. The Enteric Disease Program also reported a volume the same as for 1979. The number of specimens submitted to the Mycology Laboratory for fungal identification declined by 21.2 percent after the laboratory at the Boston City Hospital assumed responsibility for their own testing. Specimens for serological testing, however, increased by 13.1 percent when the Micology Laboratory increased its reference work for identifying unusual bacterial isolations.

Parasitology Laboratory

The Parasitology Laboratory expanded the availability of tests for the detection of parasitic diseases. More requests were received for the diagnosis of toxoplasmosis than for all the other parasitisms combined—1,785 specimens. The laboratory has begun to computerize serologic, clinical, and epidemiological data on patients tested for toxoplasmosis. The data, it is hoped, will provide useful information on the significance of the disease as a cause of blindness, mental retardation, morbidity and mortality in the Commonwealth.

Laboratory personnel, in cooperation with the Division of Communicable and Venereal Diseases, participated in the clinical, epidemiological, and diagnostic work-up of a family outbreak of trichinosis in Springfield, and of another case related to pork from swine raised on a Massachusetts farm. Source of infection in the former case was pork sold in a local supermarket.

The laboratory also provided, as a major service, consultation to the general public, laboratories, health departments, physicians and hospitals on the diagnostic, therapeutic, epidemiologic, and public health aspects of parasitic, tropical, and zoonotic diseases.

Table 3.
Five-Year Summary of Number and Kinds of Specimens Examined by the Bacteriology Laboratory.

Specimens	1976	1977	1978	1979	1980
Enteric Pathogens	10,357	10,178	10,025	10,270	10,006
Gonorrhea*	54,071	58,707	60,330	61,803	60,693
Mycology	421	425	508	950**	850**
Serology	89	90	112	230	257
Throat Cultures	106,194	97,899	95,214	97,682	111,035
Food	74	75	86	38	24
Miscellaneous	2,312	1,739	1,924	2,337	2,515
Totals	173,518	169,113	168,199	173,310	185,380

*Includes cultures and smears.
**Includes fungal serology.

Serology Laboratory

The Dr. William A. Hinton Serology Laboratory again participated successfully in the federal Syphilis Serology Proficiency Testing Program conducted by the Venereal Disease Program of the Center for Disease Control on the standard tests for syphilis. The laboratory also collaborated with the Laboratory Improvement Program in conducting the annual statewide syphilis serology proficiency testing of 280 local clinical laboratories to qualify them for state approval to perform premarital and prenatal syphilis serology testing, as required by law.

The primary potential vector of rabies for pet animals and humans in Massachusetts remains the insectivorous, colonial bat. Since 1961, when rabies was first found in local bats, the disease has been diagnosed in bats submitted to the laboratory each year. Of the 605 suspicious animals examined in the Rabies Program in fiscal year 1980, 132 were bats, seven of which were positive. The percentage positive frequency of rabies in such animals, which has ranged from 10.7 percent in 1976 to 4 percent in 1978, was 5.3 percent in 1980.

Although the disease had apparently remained confined among bats throughout the 18-year period from 1961 through 1979, the laboratory in February 1980 diagnosed the first rabies positive cat in Massachusetts since 1942. Immediately following the diagnosis, all persons exposed to the cat received either pre or postexposure vaccine against rabies. Despite intensive testing, the laboratory found no further cases in ground animals in the state.

Virology Laboratory

The Virology Laboratory expanded primary and referred diagnostic services for viral, mycoplasmal, chlamydial, and rickettsial diseases. A total of 14,196 specimens, an increase of approximately 12 percent over the previous year, were received and processed. Over 46,644 examinations (an increase of approximately 13 percent over 1979) were carried out on these specimens for the diagnosis of many acute and chronic diseases.

Encephalitis virus monitoring was provided through a very active mosquito analysis program—44,358 mosquitoes were captured and combined into 2,583 pools for testing. Only 56 eastern equine encephalitis virus (EEE) isolations were detected, 31 (55 percent) of which were collected in Peterson Swamp in the Town of Halifax in southeastern Massachusetts.

Laboratory Improvement Program

An exceptionally strong regional program of training and consultation was made possible by two new 18-month contracts from the Center for Disease Control, which became effective early in the fiscal year. The Regional Clinical Laboratory Continuing Education Program began providing training to persons working in laboratories in Maine, Massachusetts, New Hampshire, and Vermont. During the year, 19 programs, both workshops and self-study units, were presented.

In calendar year 1979, the Laboratory Improvement Program awarded certificates of approval for various bacteriological and serological tests to 281 clinical laboratories. Certificates were also awarded to 43 laboratories for environmental and sanitation procedures.

On January 1, 1980, the program stopped producing its own proficiency test specimens and encouraged laboratories to enroll in other available programs. The Laboratory Improvement Program, in cooperation with the Laboratory Regulation Program of the Division of Health Facility Regulation, began to develop new criteria for the evaluation of laboratories seeking approval for premarital and prenatal syphilis serology and for premarital rubella serology.

NEWBORN SCREENING

The third major division of the State Laboratory Institute, Newborn Screening, consolidated programs for detecting hypothyroidism, phenylketonuria (PKU), and other metabolic disorders.

Hypothyroidism Screening Program

The Hypothyroidism Screening Program screened 157,669 blood specimens for congenital hypothyroidism (cretinism) during fiscal year 1980. Of these specimens, 71,539 came from Massachusetts, and 86,130 from four other New England states (Table 4). Of the 9,686 infants with low thyroxine levels, 33 were identified as hypothyroid. Only three of these infants might have been diagnosed clinically; thus, without the screening program, the diagnosis would have been missed in the other 30 infants. All the hypothyroid infants were started on thyroid replacement therapy before three months of age, after which time damage to the central nervous system becomes irreversible.

The 33 infants have been entered into a federally funded follow-up study of the hypothyroid infants identified through screening. The study, initiated by endocrinologists from the participating New England states, has begun to evaluate the results of early treatment on physical and mental development. Parents living in the five New England states have already benefited from the study; their children have been receiving free psychometric evaluations. Physicians caring for these children have the opportunity to seek consultation from the members of the study without additional costs to the parents or to the physicians.

Metabolic Disorders Screening Program

Screening of newborn blood specimens for PKU continued to be the mainstay of the program as it has been since the program's inception in 1962. The program also tested for over 30 other inborn errors of metabolism and continued to test for PKU and three other metabolic disorders for the States of Maine and Rhode Island (Table 5). During the past fiscal year, six infants with PKU were identified and placed on a special diet within the first two weeks of life. The children were developing in a normal manner. It was anticipated that they will be spared the mental retardation that would otherwise have occurred, as has been true for the over 100 children with PKU detected by routine screening in Massachusetts since the inception of the program.

The screening program also detected three mothers with PKU. Their offspring were being evaluated to determine whether fetal damage occurred as a result of the maternal PKU. In addition, 24 babies with other metabolic disorders, such as cystinuria, galactosemia, histidinemia, Hartnup disorder, hyperglycinemia, and methylmalonic acidemia were discovered. Where therapy is available, the newborns were placed on special diets.

Newborn screening programs have continued to receive emphasis because they are cost-effective and can be carried out reliably only by a large central facility with total compliance and good quality control. Because obtaining the specimens accounts for most of the program cost, the screening program has sought to develop additional tests for each specimen. By the end of the year, the Metabolic Disorders Screening Program was investigating the feasibility of testing the newborn blood specimen for congenital adrenal hyperplasia, a serious disease of the adrenal gland.

Table 4.
Newborn Screening Laboratories
Hypothyroidism Screening Laboratory
July 1, 1979–June 30, 1980.

State	No. Screened	No. Low T4	No. Hypothyroid
Connecticut	44,451	2,601	8
Maine	16,936	1,150	3
Massachusetts	71,539	3,845	18
New Hampshire	12,421	1,007	4
Rhode Island	12,322	1,083	—
Totals	157,669	9,686	33

Table 5.
Newborn Screening Laboratories
Metabolic Disorders Laboratory July 1, 1979 - June 30, 1980.

A. Routine Specimens	Number	Percent of Live Births*
Umbilical Cord Blood	72,378	97
Newborn Blood (Massachusetts)	74,101	99
Newborn Blood (Maine)	17,362	
Newborn Blood (Rhode Island)	12,013	
Newborn Urine	57,138	76
	232,992	
B. Other Specimens**	3,390	
Total Number of Specimens	236,382	
Total Number of Tests Performed	712,751	

*Based on an estimated 70,000 live births in Massachusetts.

**Secondary specimens obtained for specific purposes such as confirming a disease in an infant (follow-up newborn blood or repeat urine specimen) or for testing immediate relatives of an infant with a known or suspected disease for the ascertainment of additional cases within a family.

HEALTH REGULATION

Through its program of standard setting, inspection, licensure, and review, the Department works to ensure the people of Massachusetts safe health care. Under the provisions of the Determination of Need Act, the Department also has the responsibility for preventing unnecessary expansion of health care facilities.

HEALTH FACILITY REGULATION

The Division of Health Facility Regulation is mandated by state and federal statutes to license and certify health care facilities and services in the Commonwealth. With the addition of the ambulance licensure program in fiscal year 1980, the Division licensed approximately 1,200 facilities, including hospitals, clinics, nursing homes, laboratories, and ambulance services. Approximately 2,000 facilities and services were certified for federal programs. The Division also reviewed, on behalf of the Department of Public Welfare, about 30,000 Medicaid clients for adequacy and quality of care, and for appropriate placement.

The Division reviewed and approved the design, planning, and construction of 386 health care facility projects involving new construction, renovations, alterations, and acquisition of new equipment to ensure the facilities' compliance with certain Life Safety Code and building requirements. Complaints concerning patient care, staffing, housekeeping and environment, and other aspects of delivery of health services affecting the safety and well-being of patients were investigated and resolved. Enforcement actions taken by the Division in fiscal year 1980 included nine license revocations, 20 decertifications, five emergency cases requiring court orders from the Office of the Attorney General, deletions of four laboratory specialties, and the issuance of one correction order.

During the year, the Division established an Office of Policy Analysis and Evaluation to serve as liaison with health planning and other state agencies, and to staff all planning, program development, and analytical efforts of the Division. To provide ongoing support for its mandated responsibilities, the Division consolidated all survey activities under one director. The Office of Compliance, which became operative early in the fiscal year, coordinated enforcement actions for all programs and served as liaison between the Division and the Department's Legal Office, and with the Office of the Attorney General.

Work was completed on the survey-by-exception project based on the concept that nursing homes providing good quality care could be identified and should, therefore, not be subject to the full annual licensure-certification survey. Approval for the demonstration project was obtained from the United States Department of Health and Human Services; the surveys were scheduled to begin in October 1980.

Rate incentive regulations allowing for reward of facilities for outstanding compliance were extended for another year at a greatly increased funding level. A Rate Incentive Task Force began meeting to develop a quality measurement system, for use in 1981 and later, and to evaluate the first year's experience with the regulations.

Regulations were developed to allow an increase in reimbursement for facilities caring for patients with severe disabilities. Promulgation of the regulations were expected in October 1980.

The Division developed an automated complaint reporting system for long-term care facilities to provide such information as facilities against which complaints are lodged, whether or not complaints are justified, and what areas of operations are involved. Operative since May 1980, the system has processed an average of 80 complaints a month.

An agreement between the Department of Public Health and the Joint Commission on Accreditation of Hospitals (JCAH) to offer "deemed" status by the Department to facilities accredited by the JCAH made a fundamental change in the approach to hospital survey and licensure. The collaborative effort will help to reduce excessive and costly regulations and the number of facilities requiring full survey by the Department.

Blood bank regulations were revised to provide for acceptance of recognized accreditation by a professional organization. Subsequently, an agreement was developed and implemented to accept the American Association of Blood Bank Accreditation. New regulations for the monitoring of hazardous infectious wastes from hospitals were also promulgated. The Legislature passed a bill to revise the definition of a clinic that clarified the types of facilities for which licensure is appropriate and identified facilities that would be exempt. By the end of the fiscal year, the Division was revising clinic regulations to conform with the mandate of the revised statute.

DETERMINATION OF NEED

Under the provisions of the Determination of Need Law (Chapter 776 of the Acts of 1972), the Department of Public Health is responsible for analyzing the need for, and cost-effective allocation of, health care facilities within the state. The purpose of the legislation was to prevent unnecessary building of new facilities or expansion of existing facilities, to avoid wasteful duplication of services and facilities, and to control spiraling health costs.

The Determination of Need Program reviewed all applications for new construction or expansion of a health care facility, for capital expenditures over $150,000 or for a major change in service (including the addition of beds). In fiscal year 1980, the program reviewed 148 applications with proposed capital expenditures of approximately $325 million. The Public Health Council determined a need for approximately $137 million.

New procedures and increased productivity reduced the time needed to process applications to a point where approximately 70 percent of applications were presented to the Public Health Council in less than eight months (Fig. 4). In the last six months of the fiscal year, 70 percent of the applications were reviewed within one to eight months of filing. Great strides were also made in reducing by 96 percent the backlog of applications filed prior to July 1, 1978. At the end of the year, only six applications were on file.

Another major improvement in the DON Program was the signing into law of Chapter 541 of the Acts of 1980. This statute brought the Massachusetts DON Program into complete compliance with federal standards. A DON Task Force established by the Governor examined the program and recommended improvements. The major finding of the Task Force was that the DON Program is valuable and should be maintained. The program will implement other recommendations within the year.

EMERGENCY MEDICAL SERVICES

The Office of Emergency Medical Services (OEMS) continued to work with many organizations and agencies on a regional and statewide basis to improve the delivery of emergency medical care. OEMS, working with public officials, hospitals, physicians, and the Massachusetts Hospital Association, helped develop regional emergency medical services systems across the Commonwealth. Five of the Massachusetts regions now have functioning regional councils, a sixth in Region V was close to formation.

OEMS and three regions submitted joint applications to the United States Department of Health and Human Services, Division of Emergency Services, for the expansion and improvement of advanced life support services (ALS). The three regions, II, III, and VI, received grants totaling $755,901. Region V received a $30,000 planning and ALS feasibility grant. All grants will become effective on July 1, 1980.

During the past year, OEMS concentrated on improved care for groups of critically ill patients. The Statewide Trauma Committee, with the cooperation of the Massachusetts Hospital Associa-

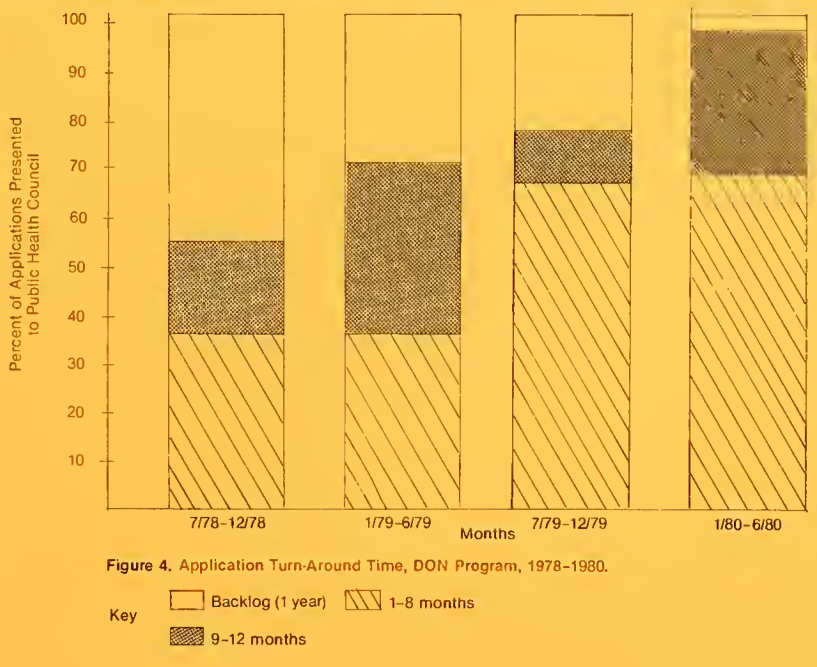


Figure 4. Application Turn-Around Time, DON Program, 1978-1980.

tion and other professional organizations, completed its two-year study of the problem. A final report of its recommendations were ready for submission to the Commissioner in July 1980. Based upon the recommendations of the report, Region II designated a trauma center in April 1980; Regions III, IV, and VI were expected to designate their centers in the first half of fiscal year 1981. In addition, the Statewide Spinal Cord Committee surveyed the care of spinal-cord injured patients and submitted its report to the Commissioner.

Programs to upgrade resources and to broaden local and state emergency medical services networks functioned throughout the year:

- OEMS provided administrative coordination and approval of all basic emergency medical technician (EMT) courses in the state. In the past year, 4,200 persons were tested and certified. A 25 percent attrition rate among basic EMTs and the expanding use of certified EMTs in health, sports, education and industrial programs required an expanded program.
- Training of emergency room nurses was maintained. The Critical Care Emergency Nurse Education Program certified 204 nurses during fiscal year 1980.
- Since January 1980, the emergency telephone number "911" has been used in 59 systems servicing 66 of the 351 cities or towns in the Commonwealth, an increase of 14 municipalities over 1979. The systems covered 2,450,149 persons, 42.3 percent of the total state population.

HEALTH PLANNING

Fiscal year 1980 marked the fourth year that the Department of Public Health functioned as the federally designated State Health Planning and Development Agency (SHPDA). The Office of State Health Planning (OSHP), the unit within the Department that carries out the SHPDA's responsibilities, prepared the second State Health Plan. The plan was approved by the 70-member State Health Coordinating Council on June 16, 1980, after six public hearings held in different parts of the state. The plan included new materials on cancer control and breast cancer, new financial standards for hospitals, analysis of health maintenance organizations (HMOs), and information on academic medical centers. Other accomplishments of OSHP during the fiscal year follow:

- Submitted to the United States Department of Health and Human Services "A Model for Assessing and Effecting Hospital Closure," an important analysis of the long-run incremental cost of hospital closure.
- Wrote a "Guide to Long-Term Care Alternatives," to be distributed to the elderly in the state, which contains information on community services available as alternatives to nursing home care.
- Drafted, and supported passage of, the Determination of Need Compliance legislation. To sharpen the standards, measures and guidelines for the DON Program, OSHP created task forces on alcoholism, radiotherapy, cardiac surgery, pediatrics and acute psychiatry.
- Continued to offer technical and promotional assistance to consumers and potential providers of prepaid health care through the Health Maintenance (HMO) Project.
- Revised the Hospital One- and Five-Year Plans, long-range planning documents required of all licensed hospitals.

HEALTH STATISTICS AND RESEARCH

The Division of Health Statistics and Research within the Office of State Health Planning is responsible for the collection and dissemination of data on vital events, licensed health professionals, and health facilities in the state. Designated the State Health Statistics Center by the

Governor, the Division had broader responsibility to provide data coordination among all agencies collecting health data, develop statistical standards, offer technical assistance to users of data, and to serve as a clearinghouse for public health research. During the past year, the Division recorded the following accomplishments:

- The Division was one of four State Health Statistics Centers nationwide to participate in a Cooperative Health Statistics System demonstration project. Under a grant from the National Center for Health Statistics, the Division improved its capabilities to disseminate and analyze data.
- The Registry of Vital Records and Statistics processed and analyzed data for approximately 200,000 births, deaths, marriages, and divorces. Personnel implemented the federally sponsored Automated Classification Medical Entities (ACME) system of death coding; all causes of death, rather than just the underlying cause, are now coded and computerized.
- The Health Resources Unit processed and analyzed data from over 100,000 health professionals and from approximately 2,000 health facilities, and aided health care facilities in preparing material for DON and appropriateness review.
- The Research Unit was expanded to provide more detailed statistical analysis of current health problems. Projects included standardized mortality ratios for every city and town in the Commonwealth and measures for neonatal mortality.

MANAGEMENT SERVICES

ADMINISTRATION

Management Services headed the Department's efforts to create revenue-producing operations wherever practical, and to promote enhanced services and economies in existing operations. The Department's external audit program was responsible for a marked improvement in vendor accountability of finances and programs, and resulted in a recapturing of several thousand dollars in overbillings.

The Evaluation Unit, formed in fiscal year 1979, provided information on the effect on clients of direct services purchased by the Department. The Evaluation Unit completed its first study, which measured outcomes of Family Health Services' Early Intervention Programs. Family Health Services used the findings to adjust its allocation of resources in the next fiscal year.

The Personnel Management Information System (PMIS), which will automate the current manual personnel-processing system, was nearing completion by the end of the fiscal year, and scheduled for implementation in fiscal year 1981.

The Office of Equal Opportunity wrote a comprehensive Affirmative Action Plan that was tested by the Civil Rights Section of the United States Department of Labor and by the state's Office of Affirmative Action. The Massachusetts plan was the only state plan to have been formally tested and approved for compliance with existing civil rights regulations.

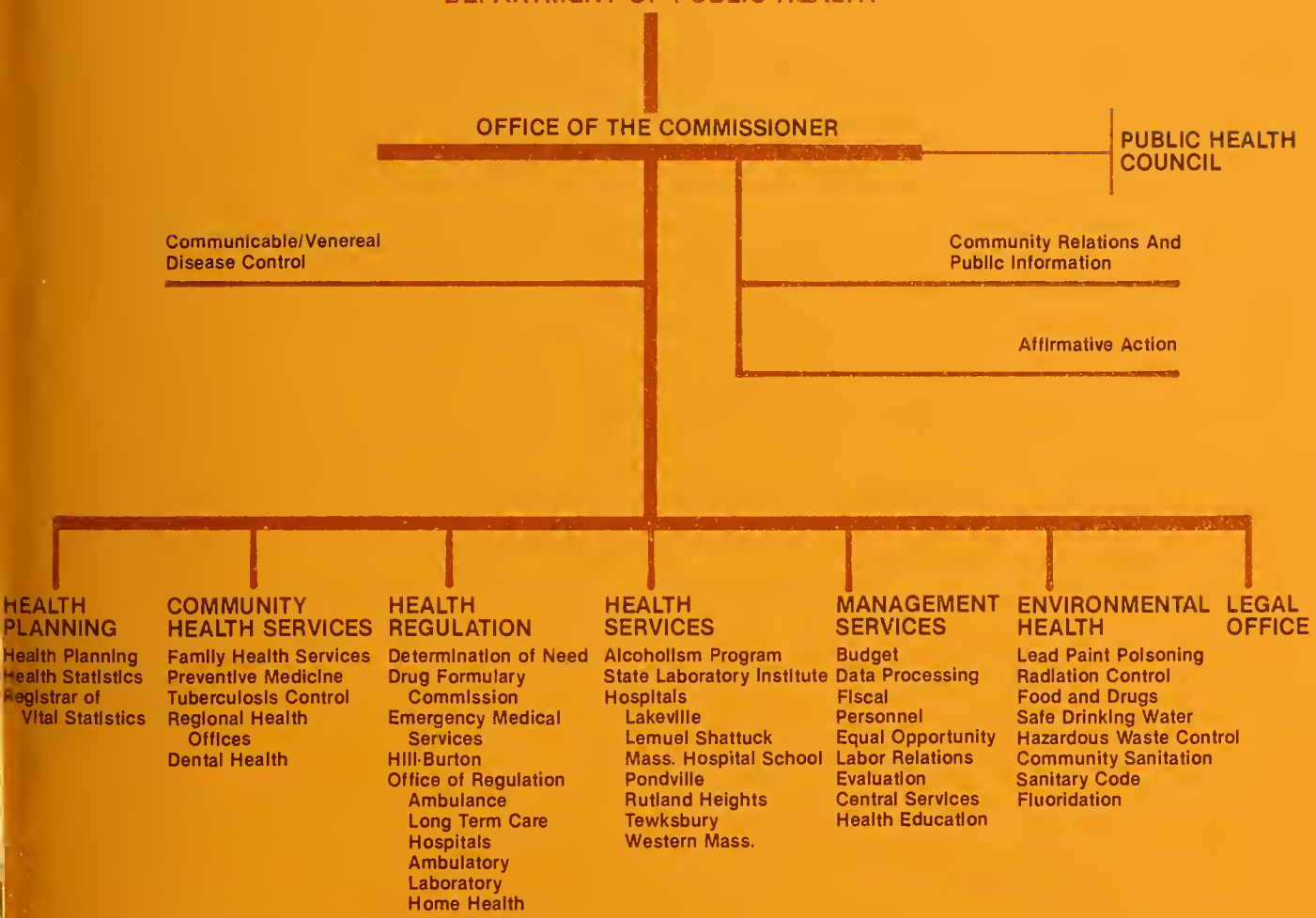
HEALTH EDUCATION

After four years as a unit within the Division of Preventive Medicine, the Division of Health Education was reestablished as an independent division. The Division was instrumental in the development and passage of legislation mandating health instruction in Massachusetts schools. Because of local autonomy, however, the legislation has not been implemented. The Division has participated in the Intradepartment School Committee and the School Health Task Force established by the Massachusetts Health Council. The Task Force, in conjunction with the Department and the Massachusetts Department of Education, sponsored seven regional workshops throughout the Commonwealth, attended by more than 800 school administrators and teachers.

EXPENDITURE REPORT
DEPARTMENT OF PUBLIC HEALTH
JULY 1, 1979 - JUNE 30, 1980

	STATE	FEDERAL	TOTAL
COMMISSIONER'S OFFICE MANAGEMENT SERVICES AND LEGAL OFFICE			
Administration	$ 2,410,449	$ 1,056,047	$ 3,466,496
COMMUNICABLE AND VENEREAL DISEASES	1,944,905	1,208,573	3,225,478
COMMUNITY HEALTH SERVICES			
Family Health Services	5,546,994	17,016,021	22,563,015
Preventive Medicine	430,028	348,204	778,232
Tuberculosis Control	2,802,702	90,094	2,892,796
Local Health	407,554	1,425,856	1,833,410
Dental Health	43,835	113,977	157,812
Sub Total	9,231,113	18,994,152	28,225,265
ENVIRONMENTAL HEALTH			
Lead Paint Poisoning	524,422	4,121	528,543
Radiation Control	99,659	54,976	154,635
Consumer Products	1,744,157	34,028	1,778,185
Sub Total	2,368,328	93,125	2,461,363
HEALTH PLANNING			
Health Planning	234,189	1,002,436	1,236,625
Health Statistics	596,220	733,147	1,329,367
Sub Total	830,409	1,735,583	2,565,992
HEALTH REGULATION			
Determination of Need	363,727	20,257	383,984
Emergency Medical Services	310,193	—	310,193
Health Facility Regulation	3,275,012	690,430	3,965,442
Sub Total	3,948,932	710,687	4,659,619
HEALTH SERVICES			
Alcoholism Program	14,576,010	4,224,290	18,800,300
State Laboratory Institute	3,893,871	472,002	4,365,873
Hospitals			
Lakeville Hospital	6,768,516	—	6,768,516
Lemuel Shattuck Hospital	14,750,325	—	14,750,325
Mass. Hospital School	5,482,132	—	5,482,132
Pondville Hospital	6,091,421	—	6,091,421
Rutland Heights Hospital	5,398,325	15,487	5,413,812
Tewksbury Hospital	14,711,582	—	14,711,582
Western Mass. Hospital	4,734,339	—	4,734,339
Sub Total	76,406,521	4,711,779	81,118,300
TOTAL	$97,140,567	$28,581,946	$125,722,513

EXECUTIVE OFFICE OF HUMAN SERVICES
DEPARTMENT OF PUBLIC HEALTH



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